

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

**POND SEALING OR LINING
ASPHALT-SEALED FABRIC LINER**

(No.)
CODE 521E

DEFINITION

Installing a fixed lining of impervious material or treating the soil in a pond mechanically or chemically to impede or prevent excessive water loss.

SCOPE

This standard applies to the sealing of ponds by the use of flexible membrane linings made of asphalt-sealed fabric.

PURPOSE

To reduce seepage losses in ponds to an acceptable level.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where water loss from a pond through leakage is, or will be, of such proportion as to prevent the pond from fulfilling its planned purpose, or where leakage will damage land and crops or cause loss of unacceptable amounts of water or environmental problems.

PLANNING CONSIDERATIONS

Water Quantity

1. Effects on the water budget, especially effects on volumes and rates of runoff, infiltration, evaporation, transpiration, deep percolation, and ground water recharge.

2. Variability of the practice's effects caused by seasonal or climatic changes.

3. Effects on downstream flows or aquifers that would affect other water uses.

4. Effects on the volume of downstream flow to prohibit undesirable environmental, social or economic effects.

5. Potential use for water management.

Water Quality

1. Effects on the movement of sediment, pathogens, and soluble material carried by seepage water.

2. Effects on the trapping of nutrients and pesticides and altering their effect on surface and ground water quality

3. Effects on the visual quality of downstream water resources.

4. Short-term and construction-related effects on the quality of the pool and downstream water.

5. Effects of water level control on the temperatures of pool and downstream water to prevent undesired effects on aquatic and wildlife communities.

6. Effects on wetlands or water-related wildlife habitats associated with the practice.

<p>Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.</p>
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DESIGN CRITERIA

Ponds to be lined shall be constructed to meet the SCS standards for Irrigation Pits or Regulating Reservoirs (552), Irrigation Storage Reservoirs (436), Ponds (378), Waste Treatment Lagoons (359), Waste Storage Ponds (425), or Wildlife Watering Facilities (648), as appropriate.

The flexible membranes to be used as linings shall be constructed of high-quality materials and shall be certified by the manufacturer to be suitable for this use. Base material used for asphalt-sealed liners shall be highly resistant to bacteriological deterioration.

Livestock shall be excluded from the site to prevent damage to the lining.

PLANS AND SPECIFICATIONS

Plans and specifications for sealing ponds with asphalt-sealed fabric liners shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.